The Coral Cavern Pearl Heist

Grade 4 math · Addition, Place value, Word problems, Bar models, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

A glowing royal pearl has vanished from the Grand Shell Vault in Coral City. The culprit left behind clues throughout the underwater kingdom.

1. Solve each math problem. The answer is a number, and the letter beside it is what that number stands for.
2. In the clue boxes, write that letter in every box showing the same number, then read the secret clue.
3. Use each clue to cross suspects off the list. The one suspect left at the end is the culprit!

My answer: the lagoon bandit is _____

Possible suspects

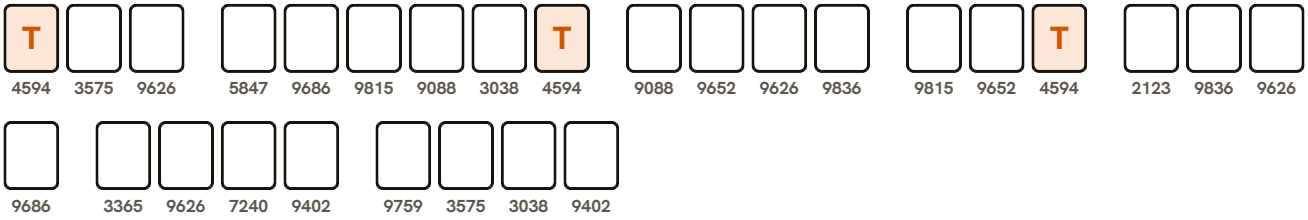
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	PRIMARY ABILITY	RELIC TOOL	DOMINANT FIN	TAIL STREAK COLOR	UNUSUAL WEAKNESS
Gale Floods	Tide Shield	Sea Glass Wand	Right Fin Striker	Seafoam Green	Dry Sand
Cora Trench	Siren Song	Kelp Whip	Right Fin Striker	Seafoam Green	Fresh Water
Dory Splashes	Tide Shield	Anchor Charm	Left Fin Striker	Seafoam Green	Dry Sand
Siren Sands	Siren Song	Shell Whistle	Left Fin Striker	Kelp Blue	Dry Sand
Pearl Shell	Siren Song	Pearl Staff	Left Fin Striker	Seafoam Green	Dry Sand
Oceanus Crest	Wave Control	Shell Whistle	Left Fin Striker	Kelp Blue	Dry Sand
Maris Shoal	Bubble Blast	Kelp Whip	Right Fin Striker	Seafoam Green	Dry Sand
Finn Triton	Coral Shape	Kelp Whip	Right Fin Striker	Seafoam Green	Flashlight Beam
Thalassa Surge	Coral Shape	Sea Glass Wand	Right Fin Striker	Kelp Blue	Flashlight Beam
Marina Aqua	Siren Song	Kelp Whip	Left Fin Striker	Seafoam Green	Dry Sand
Mako Shark	Siren Song	Pearl Staff	Left Fin Striker	Coral Pink	Dry Sand
Nerida Waves	Coral Shape	Sea Glass Wand	Right Fin Striker	Coral Pink	Fresh Water
Nixie Reef	Tide Shield	Pearl Staff	Left Fin Striker	Seafoam Green	Dry Sand
Kelp Mariner	Tide Shield	Sea Glass Wand	Right Fin Striker	Seafoam Green	Flashlight Beam
Tide Current	Wave Control	Kelp Whip	Left Fin Striker	Kelp Blue	Flashlight Beam
Abyssal Ray	Wave Control	Sea Glass Wand	Left Fin Striker	Seafoam Green	Dry Sand
Nautica Blue	Siren Song	Anchor Charm	Left Fin Striker	Kelp Blue	Dry Sand
Coralia Deep	Tide Shield	Pearl Staff	Left Fin Striker	Coral Pink	Flashlight Beam
Cascada Spray	Bubble Blast	Shell Whistle	Left Fin Striker	Kelp Blue	Dry Sand
Breeze Waters	Siren Song	Shell Whistle	Right Fin Striker	Kelp Blue	Dry Sand
Shelly Beach	Coral Shape	Anchor Charm	Left Fin Striker	Seafoam Green	Flashlight Beam

CLUE 1 Addition

Guard Captain Reef adds up the collected shell tokens to track the bandit's path.

Solve each problem, then write its letter in every clue box that shows the same number.



2130 + 2464 = ☐ → T	2472 + 4768 = ☐ → L	1964 + 1401 = ☐ → K
6353 + 3406 = ☐ → W	6154 + 3472 = ☐ → E	4596 + 5219 = ☐ → N
4062 + 5026 = ☐ → D	1198 + 925 = ☐ → U	4577 + 4825 = ☐ → P
5825 + 3861 = ☐ → A	5462 + 4374 = ☐ → S	2980 + 6672 = ☐ → O
1640 + 1935 = ☐ → H	3916 + 1931 = ☐ → B	1798 + 1240 = ☐ → I

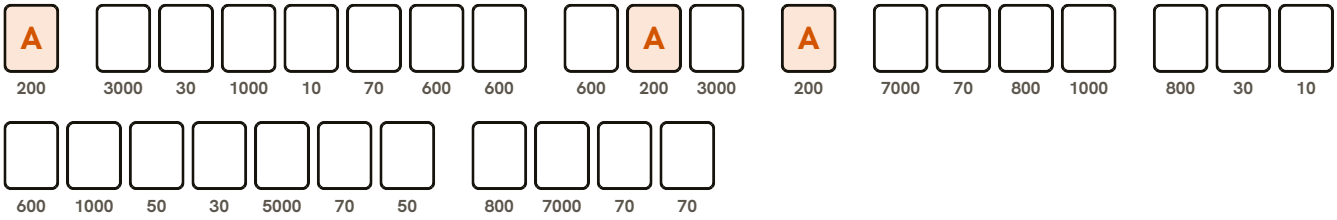
Scratch space:

CLUE 2

Place value

Analyzing the vault lock digit positions reveals a hidden place value code.

Solve each problem, then write its letter in every clue box that shows the same number.



What is the value of the 2 in 285? ☐ → A

What is the value of the 6 in 641? ☐ → S

What is the value of the 1 in 61,238? ☐ → T

What is the value of the 5 in 95,276? ☐ → K

What is the value of the 3 in 1,838? ☐ → I

What is the value of the 8 in 6,891? ☐ → F

What is the value of the 5 in 352? ☐ → R

What is the value of the 1 in 713? ☐ → N

What is the value of the 7 in 379? ☐ → E

What is the value of the 3 in 63,184? ☐ → W

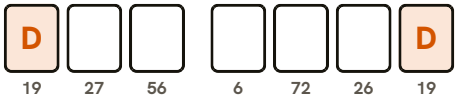
What is the value of the 7 in 67,254? ☐ → L

Scratch space:

CLUE 3 Word problems

The tide patrol solves story problems about missing supplies in the cavern.

Solve each problem, then write its letter in the boxes to fill in the missing word.

Someone scared the villain off with 

.

Reef Guard found 12 glowing pearls yesterday and 7 more today. How many glowing pearls in all?

Answer: ☐ → **D**

There were 14 coral prisms. 8 were used up. How many coral prisms are left?

Answer: ☐ → **S**

Reef Guard lined up 7 rows of 8 glowing pearls. How many glowing pearls in all?

Answer: ☐ → **Y**

Reef Guard lined up 9 rows of 3 shell lockets. How many shell lockets in all?

Answer: ☐ → **R**

Reef Guard lined up 8 rows of 9 shell lockets. How many shell lockets in all?

Answer: ☐ → **A**

There were 65 starfish tokens. 39 were used up. How many starfish tokens are left?

Answer: ☐ → **N**

Scratch space:

CLUE 4 Bar model word problems

Guardians sketch bar models of ocean current speeds to narrow down the escape route.

Draw a bar model to solve each word problem, then write its letter in the boxes to fill in the missing word.

A strand of

S								R			N
47	139	103	16	56	103	107	116		139	139	

hair turned up at the scene.

The red team has 70 glowing pearls and the blue team has 23 glowing pearls. How many more glowing pearls does the red team have?

draw a bar model

Answer: ☐ → S

The red team has 113 glowing pearls and the blue team has 10 glowing pearls. How many more glowing pearls does the red team have?

draw a bar model

Answer: ☐ → A

The red team has 115 glowing pearls and the blue team has 8 glowing pearls. How many more glowing pearls does the red team have?

draw a bar model

Answer: ☐ → M

One group collected 76 coral prisms and another group collected 63 coral prisms. How many coral prisms in all?

draw a bar model

Answer: ☐ → E

Reef Guard has 232 coral prisms, packed 2 to a bag. How many bags can be filled?

draw a bar model

Answer: ☐ → G

There were 18 starfish tokens in all. 2 starfish tokens were used. How many starfish tokens are left?

draw a bar model

Answer: ☐ → F

Reef Guard used 2/4 of the shell lockets on the first day. The other 28 shell lockets were used the next day. How many shell lockets were there in all?

draw a bar model

Answer: ☐ → O

CLUE 5 Division facts (1-12) - the last clue

> Dividing the discovered ocean gems evenly among four guard stations uncovers the next clue.

First solve each problem. Then find each answer in the numbered list below and cross that sentence out. One sentence will be left - that is exactly what the villain did!

Step 1 - solve these:

60 ÷ 12 = ☐	84 ÷ 7 = ☐	27 ÷ 3 = ☐	4 ÷ 4 = ☐	66 ÷ 11 = ☐
80 ÷ 10 = ☐	99 ÷ 9 = ☐	56 ÷ 8 = ☐	100 ÷ 10 = ☐	4 ÷ 2 = ☐
6 ÷ 2 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain raised a shimmering tide shield, then blew a sharp shell whistle.
2. The villain raised a shimmering tide shield, then cracked a heavy kelp whip.
3. The villain channeled a massive tidal wave, then pointed a gleaming pearl staff.
4. The villain raised a shimmering tide shield, then pointed a gleaming pearl staff.
5. The villain channeled a massive tidal wave, then waved a glowing sea glass wand.
6. The villain sang a bewitching siren song, then cracked a heavy kelp whip.
7. The villain channeled a massive tidal wave, then swung a heavy anchor charm.
8. The villain fired a swift bubble blast, then blew a sharp shell whistle.
9. The villain sang a bewitching siren song, then pointed a gleaming pearl staff.
10. The villain reshaped the sharp reef coral, then cracked a heavy kelp whip.
11. The villain reshaped the sharp reef coral, then swung a heavy anchor charm.
12. The villain raised a shimmering tide shield, then swung a heavy anchor charm.

TEACHER / PARENT

Answer Key

The Coral Cavern Pearl Heist

Culprit: Nixie Reef

Tide Shield · Pearl Staff · Left Fin Striker · Seafoam Green · Dry Sand

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 9 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE BANDIT DOES NOT USE A KELP WHIP"

2130 + 2464 = 4594 (T) · 2472 + 4768 = 7240 (L) · 1964 + 1401 = 3365 (K) · 6353 + 3406 = 9759 (W) · 6154 + 3472 = 9626 (E) · 4596 + 5219 = 9815 (N) · 4062 + 5026 = 9088 (D) · 1198 + 925 = 2123 (U) · 4577 + 4825 = 9402 (P) · 5825 + 3861 = 9686 (A) · 5462 + 4374 = 9836 (S) · 2980 + 6672 = 9652 (O) · 1640 + 1935 = 3575 (H) · 3916 + 1931 = 5847 (B) · 1798 + 1240 = 3038 (I)

Clue 2 (Place value): "A WITNESS SAW A LEFT FIN STRIKER FLEE"

What is the value of the 2 in 285? = 200 (A) · What is the value of the 6 in 641? = 600 (S) · What is the value of the 1 in 61,238? = 1000 (T) · What is the value of the 5 in 95,276? = 5000 (K) · What is the value of the 3 in 1,838? = 30 (I) · What is the value of the 8 in 6,891? = 800 (F) · What is the value of the 5 in 352? = 50 (R) · What is the value of the 1 in 713? = 10 (N) · What is the value of the 7 in 379? = 70 (E) · What is the value of the 3 in 63,184? = 3000 (W) · What is the value of the 7 in 67,254? = 7000 (L)

Clue 3 (Word problems): "DRY SAND"

Reef Guard found 12 glowing pearls yesterday and 7 more today. How many glowing pearls in all? = 19 (D) · There were 14 coral prisms. 8 were used up. How many coral prisms are left? = 6 (S) · Reef Guard lined up 7 rows of 8 glowing pearls. How many glowing pearls in all? = 56 (Y) · Reef Guard lined up 9 rows of 3 shell lockets. How many shell lockets in all? = 27 (R) · Reef Guard lined up 8 rows of 9 shell lockets. How many shell lockets in all? = 72 (A) · There were 65 starfish tokens. 39 were used up. How many starfish tokens are left? = 26 (N)

Clue 4 (Bar model word problems): "SEAFOAM GREEN"

The red team has 70 glowing pearls and the blue team has 23 glowing pearls. How many more glowing pearls does the red team have? = 47 (S) · The red team has 113 glowing pearls and the blue team has 10 glowing pearls. How many more glowing pearls does the red team have? = 103 (A) · The red team has 115 glowing pearls and the blue team has 8 glowing pearls. How many more glowing pearls does the red team have? = 107 (M) · One group collected 76 coral prisms and another group collected 63 coral prisms. How many coral prisms in all? = 139 (E) · Reef Guard has 232 coral prisms, packed 2 to a bag. How many bags can be filled? = 116 (G) · There were 18 starfish tokens in all. 2 starfish tokens were used. How many starfish tokens are left? = 16 (F) · Reef Guard used 2/4 of the shell lockets on the first day. The other 28 shell lockets were used the next day. How many shell lockets were there in all? = 56 (O)

Clue 5 (Division facts (1-12)): surviving statement is box 4 → Nixie Reef

60 ÷ 12 = 5 · 84 ÷ 7 = 12 · 27 ÷ 3 = 9 · 4 ÷ 4 = 1 · 66 ÷ 11 = 6 · 80 ÷ 10 = 8 · 99 ÷ 9 = 11 · 56 ÷ 8 = 7 · 100 ÷ 10 = 10 · 4 ÷ 2 = 2 · 6 ÷ 2 = 3